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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,288	03/16/2004	Margaret J. Helber	87742AEK	2994

7590 03/17/2006
Paul A. Leipold
Patent Legal Staff
Eastman Kodak Company
343 State Street
Rochester, NY 14650-2201

EXAMINER

GARRETT, DAWN L

ART UNIT PAPER NUMBER

1774

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/801,288	HELBERT ET AL.	
	Examiner	Art Unit	
	Dawn Garrett	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/16/2004;6/6/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1 and 24 are objected to because of the following informalities:
 - a. In line 7 of page 79 (claim 1), “orb)” should be changed to “or b)”.
 - b. It is suggested that “the derivative” in claim 24 be replaced with “the red light-emitting compound” for clarity and clearer antecedent basis.Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 24 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 23, upon which claim 24 depends, recites a “red light-emitting compound” and dependent claim 24 states the derivative does not emit light. The claims are contradictory, because claim 23 clearly states the compound is light emitting. Clarification is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

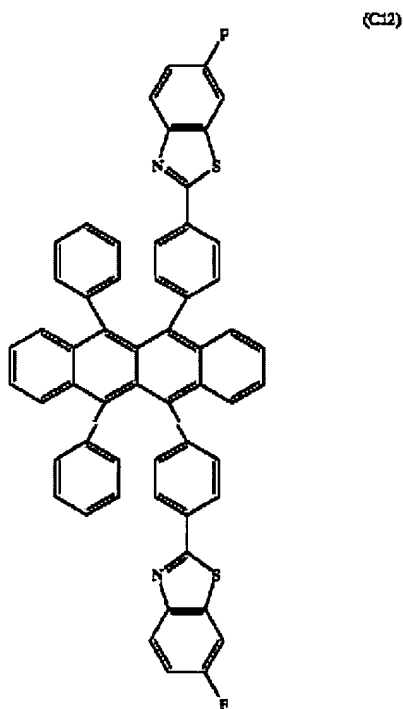
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6, 8, 14-17, 23, 24, and 27-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamada et al. (WO 02/100977) (note : US 2005/0079381 is an English language

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equivalent of the WO document). Hamada et al. discloses organic electroluminescence devices comprising a light emitting layer of a host material, light emitting dopant and a first light-emission assisting dopant composed of a rubrene derivative (see abstract). One rubrene derivative for the light emitting layer is the following with fluorine-containing substituents:



Formula “C12” satisfies limitation “b)” of claim 1. The property limitations of claims 14 and 15 are considered to be inherent to the “C12” compound, absent evidence otherwise, because the compound is set forth according to the rubrene compound described by applicant and is therefore considered to have the same properties. Recitation of a newly disclosed property does not distinguish over a reference disclosure of the article or composition claims. *General Electric v. Jewe Incandescent Lamp Co.*, 67 USPQ 155. *Titanium Metal Corp. v. Banner*, 227 USPQ 773. Applicant bears responsibility for proving that reference composition does not possess the

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characteristics recited in the claims. *In re Fitzgerald*, 205 USPQ 597, *In re Best*, 195 USPQ 430.

With regard to claim 16, Hamada further discloses a second light emitting layer that contains a luminescent material that emits blue light (see par. 54 of US 2005/0079381 for reference). With regard to claim 17, Hamada discloses perylene derivatives as suitable blue dopant material (see par. 111 of US 2005/0079381 for reference). With regard to claims 23-24, Hamada further discloses adding red light emitting dopant DCJTB in the light emitting layer (see par. 178 of US 2005/0079381 for reference). With regard to claims 27 and 28, Hamada discloses NPB as a host material for the light emitting layer (see Table 9, page 42 of US 2005/0079381 for reference). With regard to claims 29 and 30, Hamada discloses electron transporting material Alq as a host material (see Table 8, page 41 of US 2005/0079381 for reference). With regard to claims 31 and 32, Hamada discloses 5% of the rubrene derivative is used in the light emitting layer (see Tables shown in US 2005/0079381). Hamada discloses white light emitting devices (see Table 11).

6. Claims 1-19, 23, 24, and 27-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Begley et al. (US 2005/0095450).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

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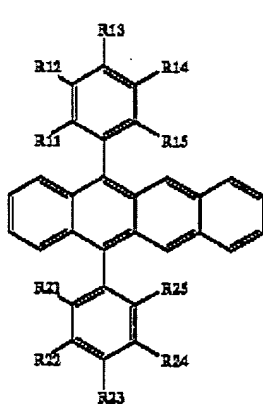
Begley et al. discloses OLED devices comprising a light-emitting layer containing a host and an emitting dopant (see abstract). Fluorine or fluorine-containing substituents may be contained on the phenyl rings of the “c” ring of the naphthacene skeleton as required by the claims (see par. 37-42 for example). See entire patent for disclosure of dopant amounts (see claims) and further dopants (par. 166) as required by the claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-17, 23, 24, and 27-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (WO 02/100977) (note : US 2005/0079381 is an English language equivalent of the WO document). Hamada et al. discloses organic electroluminescence devices comprising a light emitting layer of a host material, light emitting dopant and a first light-emission assisting dopant composed of a rubrene derivative (see abstract). The rubrene derivative is the following:



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[0020] wherein R11-R15 and R21-R25 are the same or different and each represent a hydrogen atom or a substituent. Adjacent two of R11-R15 and adjacent two of R21-R25 may be bonded together to form rings. Adjacent three of R11-R15 and adjacent three of R21-R25 may be bonded together to form rings.

The generic formula teaches the “R” variables may be substituents, which would encompass fluoro and perfluoro substituents as claimed. The property limitations of claims 11- 15 considered to be inherent to the rubrene compounds, absent evidence otherwise, because the compounds include rubrene compounds described by applicant and are considered to have the same properties. Recitation of a newly disclosed property does not distinguish over a reference disclosure of the article or composition claims. *General Electric v. Jewe Incandescent Lamp Co.*, 67 USPQ 155. *Titanium Metal Corp. v. Banner*, 227 USPQ 773. Applicant bears responsibility for proving that reference composition does not possess the characteristics recited in the claims. *In re Fitzgerald*, 205 USPQ 597, *In re Best*, 195 USPQ 430.

With regard to claim 16, Hamada further discloses a second light emitting layer that contains a luminescent material that emits blue light (see par. 54 of US 2005/0079381 for reference). With regard to claim 17, Hamada discloses perylene derivatives as suitable blue dopant material (see par. 111 of US 2005/0079381 for reference). With regard to claims 23-24, Hamada further discloses adding red light emitting dopant DCJTB in the light emitting layer (see par. 178 of US 2005/0079381 for reference). With regard to claims 27 and 28, Hamada discloses NPB as a host material for the light emitting layer (see Table 9, page 42 of US 2005/0079381 for reference). With regard to claims 29 and 30, Hamada discloses electron transporting material Alq as a host material (see Table 8, page 41 of US 2005/0079381 for reference). With regard to claims 31 and 32, Hamada discloses 5% of the rubrene derivative is used in the light emitting

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layer (see Tables shown in US 2005/0079381). Hamada discloses white light emitting devices (see Table 11).

Although Hamada et al. fails to exemplify all of the specifically substituted rubrene derivatives claimed by applicant, Hamada et al. does generally teach the required rubrene derivative containing substituents at the required positions and the substituents required by applicant fall within the “substituents” taught by Hamada. It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected rubrene derivatives with the required fluoro and/or perfluoro derivatives as claimed, because Hamada et al. clearly teaches substituents may be present at the required positions of the phenyl rings attached to the naphthalene nucleus of the rubrene derivative.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (WO 02/100977) in view of Hosokawa et al. (US 5,121,029). Hamada et al. is relied upon as set forth above and discloses blue light emitting materials are used in the light emitting device. Hamada et al. fails to teach specifically the blue or blue-green compound of claim 18. Hosokawa et al. teaches in analogous art teaches blue emitting compounds according to the required formula (see fourth compound in col. 33 and 34 for example). It would have been obvious to one of ordinary skill in the art to have selected the compounds taught by Hosokawa for the Hamada et al. device, because Hamada et al. clearly teaches blue emitting light emitting materials are desired for the devices. One would have a reasonable expectation of success that the compounds taught by Hosokawa et al. would exhibit similar light emitting properties in the Hamada et al. device.

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10. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (WO 02/100977) in view of Hoag et al. (EP 1340798). Hamada et al. is relied upon as set forth above and discloses blue light emitting materials are used in the light emitting device. Hamada et al. fails to teach specifically the blue or blue-green boron complexes of claims 20-22. Hoag teaches in analogous art teaches blue emitting boron complexes according to the required formula (see entire document). It would have been obvious to one of ordinary skill in the art to have selected boron complexes taught by Hoag for the Hamada et al. device, because Hamada et al. clearly teaches blue emitting light emitting materials are desired for the devices. One would have a reasonable expectation of success that the boron complexes would exhibit similar light emitting properties in the Hamada et al. device.

11. Claims 25 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Hamada et al. (WO 02/100977) in view of Fukuoka et al. (US 6,803,120). Hamada et al. is relied upon as set forth above and discloses red light emitting materials are used in the light emitting device. Hamada et al. fails to teach specifically the compounds of claims 25 and 26. Fukuoka teaches in analogous art teaches red emitting compounds according to the required formula (top of column 11). It would have been obvious to one of ordinary skill in the art to have selected boron complexes taught by Fukuoka for the Hamada et al. device, because Hamada et al. clearly teaches red emitting light emitting materials are desired for the devices. One would have a reasonable expectation of success that the compounds taught by Fukuoka would exhibit similar light emitting properties in the Hamada et al. device.

Double Patenting

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12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1-19 23, 24, and 27-36 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-38 of copending Application No. 10/700,894. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 3 of ‘450 discloses a rubrene skeleton that requires at least one fluorine or fluorine-containing substituent and this disclosure encompasses the rubrene derivatives claimed in the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion


14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Dawn Garrett
Primary Examiner
Art Unit 1774

D.G.
March 13, 2006